

Claims:

- 1) A process for the concentration or purification of nucleic acids and proteins comprising the steps of providing an ultrafiltration membrane having an upstream and a downstream side, said membrane having a molecular cutoff between 100 D and 300kD, adding a volume of liquid of less than about 1000 microliters, said volume containing a biological material selected from the group consisting of nucleic acids, proteins and blends thereof and subjecting the volume to a constant pressure differential until a desired concentration of the biological material on the upstream side is reached.
- 2) A process for the concentration or purification of nucleic acids and proteins comprising the steps of providing an ultrafiltration membrane having an upstream and a downstream side, said membrane having a molecular cutoff between 100 D and 300kD, adding a volume of liquid containing a biological material selected from the group consisting of nucleic acids, proteins and blends thereof and subjecting the material to centrifugation until at least about 350 microliters or less of the initial volume remains, then subjecting the remaining volume to a constant pressure differential until a desired concentration of the biological material on the upstream side is reached.
- 3) The process of claim 1 wherein the constant pressure differential is a vacuum from about 169 millibars to about 914millibars
- 4) The process of claim 2 wherein the constant pressure differential is a vacuum from about 169 millibars to about 914millibars
- 5) The process of claim 1 wherein the constant pressure differential is a positive pressure from about 5 to about 80 psi.
- 6) The process of claim 2 wherein the constant pressure differential is a positive pressure from about 5 to about 80 psi.
- 7) The process of claim 1 wherein the device is a single well device.
- 8) The process of claim 1 wherein the device is a multiple well device.
- 9) The process of claim 1 wherein the device is a 96 well plate.
- 10) The process of claim 1 wherein the number of wells in the plate is from about 6 to about 1536.
- 11) The process of claim 2 wherein the device is a single well device.

- 12) The process of claim 2 wherein the device is a multiple well device.
- 13) The process of claim 2 wherein the device is a 96 well plate.
- 14) The process of claim 2 wherein the number of wells in the plate is from about 6 to about 1536.
- 5 15) The process of claim 1 wherein the membrane has a molecular cutoff of from about 100 Daltons to about 500 kDaltons.
- 16) The process of claim 2 wherein the cutoff is from about 3 to about 300 kDaltons.
- 17) The process of claim 1 wherein the membrane is made of a material selected from the group consisting of polyamides, polysulphones, polyethersulphones  
10 polyarylsulphones, cellulotics, regenerated celluloses, polyolefins such as polyethylene and polypropylene and polyvinylidene fluoride.
- 18) The process of claim 2 wherein the membrane is made of a material selected from the group consisting of polyamides, polysulphones, polyethersulphones  
polyarylsulphones, cellulotics, regenerated celluloses, polyolefins such as  
15 polyethylene and polypropylene and polyvinylidene fluoride.
- 19) The process of claim 1 wherein the starting volume of liquid is less than about 500 microliters.
- 20) The process of claim 1 wherein the starting volume of liquid is less than 350 microliters.
- 20 21) The process of claim 1 wherein the process is free of a diafiltration step.
- 22) The process of claim 2 wherein the process is free of a diafiltration step.